

1991 ALBERTA HOUSE COST COMPARISON STUDY
24 UNIT WALK-UP APARTMENT



MUNICIPAL AFFAIRS
Housing Division



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**1991 ALBERTA HOUSE COST COMPARISON STUDY
24 UNIT WALK-UP APARTMENT**

NOVEMBER 1991

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ISSN: 0822-3920



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PREFACE

The purpose of the 1991 Alberta House Cost Comparison Study is to estimate the hard construction costs of a typical single detached house in ten urban centres across the Province and a 24 unit walk-up apartment building in Edmonton and Calgary.

The study also compares the current 1991 construction costs with those of previous years in the selected urban centres. Emphasis is given to comparing 1991 costs with 1990 costs and the study includes an analysis of the differences.

The study was carried out by the firm of Helyar & Associates and is documented in three reports:

1991 Alberta House Cost Comparison Study:	Executive Summary
1991 Alberta House Cost Comparison Study:	Single Detached Dwelling
1991 Alberta House Cost Comparison Study:	24 Unit Walk-up Apartment

Additional copies of any of these reports can be ordered from :

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1.0 INTRODUCTION

1.0 INTRODUCTION

1.1 Objectives

The objectives of the 1991 Alberta House Cost Comparison Study were:

1. To determine 1991 hard residential construction costs in ten selected urban centres in Alberta.
2. To determine reasons for differences in residential construction costs in the selected centres.
3. To carry out detailed comparisons of 1991 costs with 1990 costs in each centre.
4. To determine and comment upon residential construction cost trends over the last eleven years in each centre.

1.2 Scope of Work

The 1991 Study examined the construction costs of a typical single detached house and a 24 unit walk-up apartment building.

The study has been documented in three reports :

1991 Alberta House Cost Comparison Study:	Executive Summary
1991 Alberta House Cost Comparison Study:	Single Detached Dwelling
1991 Alberta House Cost Comparison Study:	24 Unit Walk-up Apartment

This report relates to the 24 Unit Walk-up Apartment Building. This building is a basic three storey walk-up, with normal foundations, slab on grade, flat roof, wood frame construction, basic mechanical and electrical systems and basic finishes.

1.0 INTRODUCTION

1.2 Scope of Work (continued)

The study examined 24 unit walk-up apartment construction costs in the following urban centres:

1. Calgary
2. Edmonton

The cost analyses examined construction cost differences between the centres and identified reasons for those differences with reference to such factors as:

- a) material costs,
- b) labour costs,
- c) building features and inclusions,
- d) construction specifications,
- e) recent market activity and
- f) other factors as appropriate.

1.0 INTRODUCTION

1.2 Scope of Work (continued)

Cost estimates for the 24 unit walk-up apartment for the two centres include all structural, finishing, mechanical and electrical work as shown and specified on the drawings. Costs have not been included for the following items:

- a) land cost and site clearance,
- b) site servicing,
- c) site development,
- d) design fees and disbursements,
- e) legal fees and disbursements,
- f) marketing and real estate fees,
- g) financing costs,

1.3 Drawings

The drawings of the 24 unit walk-up apartment used for this study are as follows:

- 1. Site plan
- 2. Foundation plan
- 3. Basement floor plan
- 4. Main floor plan
- 5. 2nd and third floor plan
- 6. Building elevations
- 7. Section and details
- 8. Basement floor plan – Mechanical layout
- 9. Main floor plan – Mechanical layout
- 10. 2nd and third floor plan – Mechanical layout
- 11. Basement floor plan – Electrical layout
- 12. Main floor plan – Electrical layout
- 13. 2nd and third floor plan – Electrical layout

Reduced copies of these drawings are attached as an Appendix.

1.0 INTRODUCTION

1.4 Approach

Costs are provided in this report under the headings of "Labour Item Cost" and "Material/Equipment Item Cost". The breakdowns between labour and material/equipment costs have generally been provided by the applicable trade contractors. Labour rates have been determined through research and discussion with those contractors and, where necessary, realistic assessments have been made of current rates by examining the circumstances of the particular sub-trade involved. Material prices have been established by evaluation of information provided by materials suppliers and trade contractors. Discounts have been applied where appropriate.

Prior to this year, the 24 unit walk-up apartment study had covered ten urban centres. It now covers two centres only; Calgary and Edmonton. Additionally, the categories contained in the detailed costing have been revised so as to better represent estimating practices in the residential construction industry.

Cost data are assembled by sub-trade and are now presented in 19 trade categories plus categories for site overhead and general contractor's overhead & profit. The latter two categories have now been shown with items individually costed. The sub-trade operations are combined within each trade category in order to reflect industry estimating practice.

The cost effects of market forces and residential construction industry conditions are addressed in Section 3.0 "Commentary".

1.5 Federal Taxation

Federal Sales Tax (FST) was replaced by the Goods & Services Tax (GST) on January 1, 1991.

Prior to its demise on December 31, 1990, FST had been levied on materials at rates of 9% and 13.5%. The allocation of the differing rates was defined in the relevant rules and regulations but, as an example, the higher rate was applied to items such as carpet, mechanical equipment and lighting fixtures. There were exceptions to the above, some items were exempt and the odd one or two had different rates of tax applied.

GST however, with a few exceptions, has a rate of 7% applied to all goods and services.

2.0 SUMMARY OF FINDINGS FOR THE 24 UNIT WALK-UP APARTMENT

2.0 SUMMARY OF FINDINGS FOR THE 24 UNIT WALK-UP APARTMENT

TABLE WA. 1 : Total Building Costs

ITEM	CALGARY	EDMONTON
Labour	\$287,767 37.8%	\$297,002 37.9%
Material	\$473,507 62.2%	\$486,828 62.1%
Total 1991	\$761,274	\$783,830
Cost / m2	\$409.95	\$422.09
Cost / SF	\$38.09	\$39.21
Cost / SF 1990	\$41.64	\$41.24
Total 1990	\$832,328	\$824,241
% Change From 1990	-8.5%	-4.9%

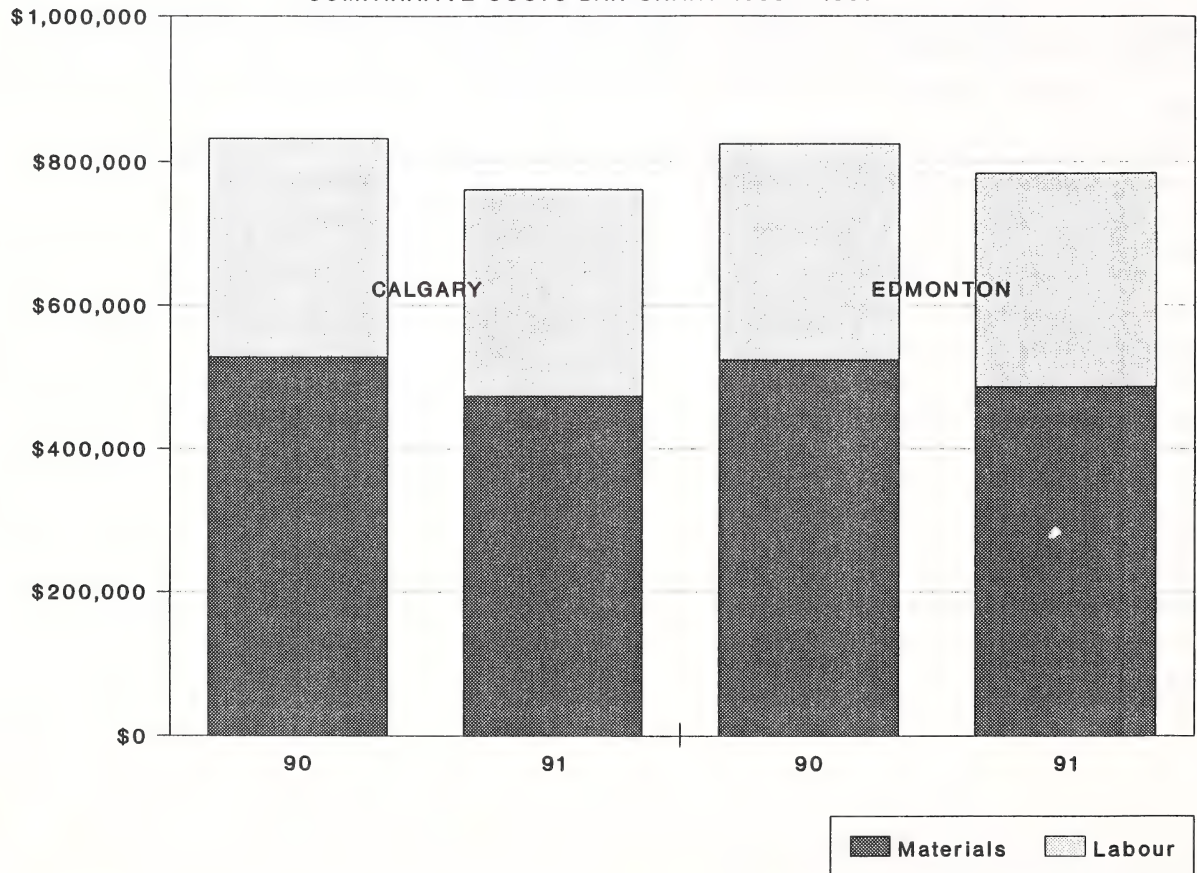
TABLE WA. 2 : Comparative Cost Ratios

LOCATION	CALGARY	EDMONTON
CALGARY	1.00	1.03
EDMONTON	0.97	1.00

TABLE WA. 3 : Comparative Costs 1990 – 1991

LOCATION	CALGARY	EDMONTON
Labour Cost		
1991	\$287,767	\$297,002
1990	\$304,190	\$300,349
Difference	(\$16,423)	(\$3,347)
% Difference	-5.4%	-1.1%
Material Cost		
1991	\$473,507	\$486,828
1990	\$528,138	\$523,892
Difference	(\$54,631)	(\$37,064)
% Difference	-10.3%	-7.1%
Total Cost		
1991	\$761,274	\$783,830
1990	\$832,328	\$824,241
Difference	(\$71,054)	(\$40,411)
% Difference	-8.5%	-4.9%

2.0 SUMMARY OF FINDINGS FOR THE 24 UNIT WALK-UP APARTMENT
CHART WA. 4:
COMPARATIVE COSTS BAR CHART 1990 - 1991



2.0 SUMMARY OF FINDINGS FOR THE 24 UNIT WALK-UP APARTMENT

**TABLE WA. 5 : Comparative Total Building Costs
1981 – 1991 (Nominal Dollars)**

YEAR	AVERAGE	CALGARY	EDMONTON
1981	\$716,748	\$719,003	\$714,492
1982	\$646,559	\$627,844	\$665,273
1983	\$597,610	\$592,174	\$603,046
1984	\$595,950	\$591,861	\$600,039
1985	\$621,512	\$617,049	\$625,974
1986	\$647,835	\$647,135	\$648,534
1987	\$709,010	\$724,502	\$693,517
1988	\$735,201	\$744,420	\$725,982
1989	\$786,666	\$792,405	\$780,927
1990	\$828,285	\$832,328	\$824,241
1991	\$772,552	\$761,274	\$783,830

**TABLE WA. 6 : Comparative Total Building Costs
1981 – 1991 (Inflation Adjusted Dollars)**

YEAR	AVERAGE	CALGARY	EDMONTON
1981	\$1,151,813	\$1,155,438	\$1,148,189
1982	\$937,510	\$910,374	\$964,646
1983	\$818,726	\$811,278	\$826,173
1984	\$794,997	\$789,543	\$800,452
1985	\$804,236	\$798,461	\$810,010
1986	\$811,737	\$810,860	\$812,613
1987	\$852,229	\$870,851	\$833,607
1988	\$860,185	\$870,971	\$849,399
1989	\$881,066	\$887,494	\$874,638
1990	\$877,153	\$881,435	\$872,871
1991	\$772,552	\$761,274	\$783,830

2.0 SUMMARY OF FINDINGS FOR THE 24 UNIT WALK-UP APARTMENT

TABLE WA. 7 : Comparative Costs Per Apartment Unit 1981 – 1991 (Nominal Dollars)				TABLE WA. 8 : Comparative Costs Per Apartment Unit 1981 – 1991 (Inflation Adjusted Dollars)			
YEAR	AVERAGE	CALGARY	EDMONTON	YEAR	AVERAGE	CALGARY	EDMONTON
1981	\$29,865	\$29,958	\$29,771	1981	\$47,992	\$48,143	\$47,842
1982	\$26,940	\$26,160	\$27,720	1982	\$39,063	\$37,932	\$40,194
1983	\$24,901	\$24,674	\$25,127	1983	\$34,114	\$33,803	\$34,424
1984	\$24,832	\$24,661	\$25,002	1984	\$33,125	\$32,898	\$33,353
1985	\$25,896	\$25,710	\$26,082	1985	\$33,509	\$33,269	\$33,750
1986	\$26,993	\$26,964	\$27,022	1986	\$33,822	\$33,786	\$33,859
1987	\$29,543	\$30,188	\$28,897	1987	\$35,510	\$36,286	\$34,734
1988	\$30,634	\$31,018	\$30,249	1988	\$35,841	\$36,291	\$35,391
1989	\$32,778	\$33,017	\$32,539	1989	\$36,711	\$36,979	\$36,444
1990	\$34,512	\$34,680	\$34,343	1990	\$36,548	\$36,726	\$36,369
1991	\$32,190	\$31,720	\$32,660	1991	\$32,190	\$31,720	\$32,660

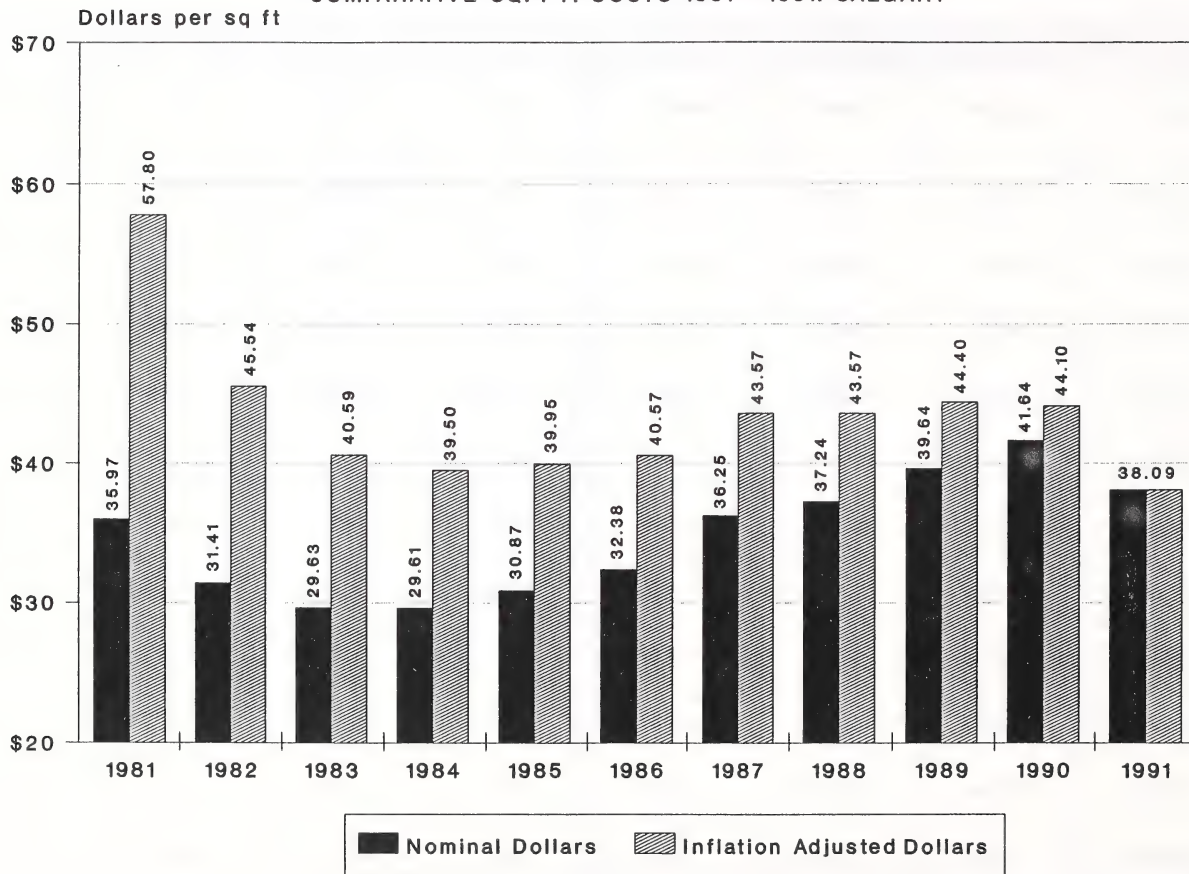
2.0 SUMMARY OF FINDINGS FOR THE 24 UNIT WALK-UP APARTMENT

TABLE WA. 9 : Comparative Square Foot Unit Costs 1981 – 1991 (Nominal Dollars)				TABLE WA. 10 : Comparative Square Foot Unit Costs 1981 – 1991 (Inflation Adjusted Dollars)			
YEAR	AVERAGE	CALGARY	EDMONTON	YEAR	AVERAGE	CALGARY	EDMONTON
1981	\$35.86	\$35.97	\$35.75	1981	\$57.62	\$57.80	\$57.44
1982	\$32.35	\$31.41	\$33.28	1982	\$46.90	\$45.54	\$48.26
1983	\$29.90	\$29.63	\$30.17	1983	\$40.96	\$40.59	\$41.33
1984	\$29.81	\$29.61	\$30.02	1984	\$39.77	\$39.50	\$40.05
1985	\$31.09	\$30.87	\$31.32	1985	\$40.23	\$39.95	\$40.52
1986	\$32.41	\$32.38	\$32.45	1986	\$40.61	\$40.57	\$40.65
1987	\$35.47	\$36.25	\$34.70	1987	\$42.64	\$43.57	\$41.70
1988	\$36.78	\$37.24	\$36.32	1988	\$43.03	\$43.57	\$42.49
1989	\$39.36	\$39.64	\$39.07	1989	\$44.08	\$44.40	\$43.76
1990	\$41.44	\$41.64	\$41.24	1990	\$43.88	\$44.10	\$43.67
1991	\$38.65	\$38.09	\$39.21	1991	\$38.65	\$38.09	\$39.21

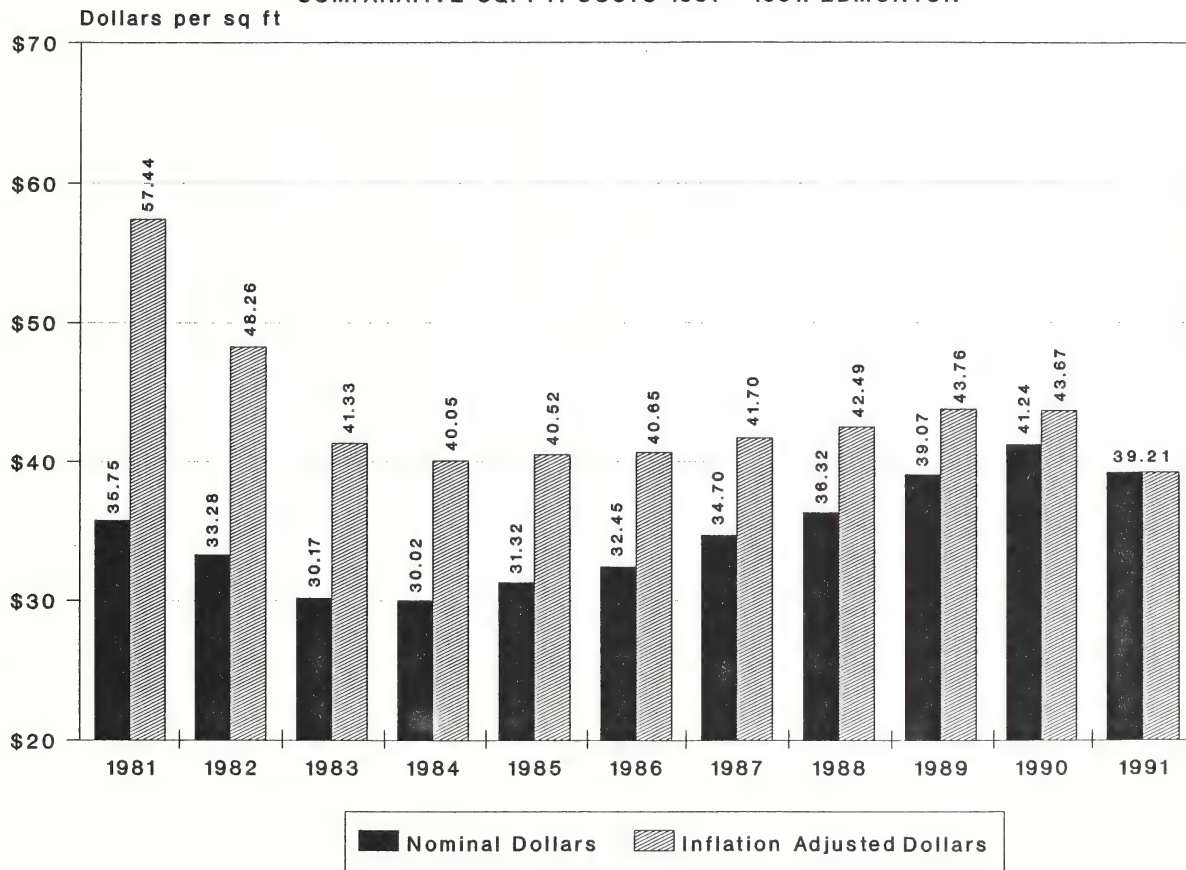
2.0 SUMMARY OF FINDINGS FOR THE 24 UNIT WALK-UP APARTMENT

CHART WA. 11:

COMPARATIVE SQ. FT. COSTS 1981 - 1991: CALGARY



2.0 SUMMARY OF FINDINGS FOR THE 24 UNIT WALK-UP APARTMENT
 CHART WA. 11:
 COMPARATIVE SQ. FT. COSTS 1981 - 1991: EDMONTON



2.0 SUMMARY OF FINDINGS FOR THE 24 UNIT WALK-UP APARTMENT

TABLE WA. 12 : Trade Division Cost Summaries		
TRADE	CALGARY	EDMONTON
1. Excavation & Backfill	5,339	5,449
2. Concrete & Gravel	21,016	22,144
3. Rough Carpentry	82,209	85,881
4. Roofing	18,461	16,283
5. Windows & Doors	27,870	32,255
6. Exterior Cladding	16,720	16,206
7. Plumbing	58,080	64,320
8. Electrical	51,960	56,760
9. Heating	33,600	37,200
10. Ventilation	24,000	24,000
11. Fire Protection	2,496	2,760
12. Specialty Items	14,272	13,294
13. Drywall, Insulation & Caulking	53,757	54,474
14. Cabinets & Vanities	49,410	48,435
15. Interior Finishing	54,439	54,674
16. Painting, Stain & Lacquer	20,608	20,690
17. Floor Coverings	50,914	50,006
18. Ceramic Tile	5,480	5,480
19. Appliances	35,240	35,240
20. Site Overhead	44,500	44,500
21. General Contractor's Overhead & Profit	41,100	42,500
Subtotal	\$711,471	\$732,551
Goods & Services Tax	49,803	51,279
TOTALS	\$761,274	\$783,830

3.0 COMMENTARY

3.0 COMMENTARY

3.1 General

Economic Factors

Canada's economy experienced the full effect of recession in 1991 and although Ontario and Quebec were probably hardest hit, Alberta did not get by unscathed. The problem of the provincial debt, debt financing and annual budget deficits meant that the cuts in government spending, particularly on capital construction projects, were continued through the 1991 budget and little change is expected through 1992.

Despite interest rates which fell significantly through 1991, in November the Canadian dollar reached it's strongest level against the US dollar since 1978 which meant that national and provincial exports were less competitive in world markets.

The latter part of 1990 and early 1991 saw a weakening of domestic demand; housing starts fell and retail sales declined. The introduction of the GST in January 1991 and the effects of the Free Trade Agreement with the United States (e.g. cross border shopping) added to this decline. All of these factors have led to a higher unemployment rate.

In addition to the introduction of the GST, the Federal Government cut transfers to the provinces which fund health, education and social assistance programs. These measures, among others, were taken to reduce the national debt but in many respects merely passed on fiscal problems to the provinces. The political instability caused by the government's inability to resolve the national unity issue continues to create uncertainty in the minds of foreign investors.

Oil prices have remained relatively weak, certainly less than was predicted in the 1991 provincial budget and therefore royalty revenues have been lower than anticipated. Several major companies involved in the oil sector have continued to reduce staff levels, the effects of which have been most strongly felt in Calgary.

The very modest growth in Gross Domestic Product in the province of just under one percent was sustained to a large extent by projects such as the Lloydminster heavy oil upgrader, the Caroline sour gas plant and the Alberta Pacific (Al Pac) forestry project. While these projects will continue through 1992, they are not sufficient to sustain continued growth.

All of these factors have contributed to a weakening of both consumer and investor confidence.

On the positive side, a lower bank rate has seen conventional mortgage interest rates fall to their lowest level in many years. This has, to a degree, stimulated new house construction but not to the extent that a significant turnaround could be predicted.

3.0 COMMENTARY

3.1 General (continued)

Labour

The construction of apartment buildings is generally undertaken by a developer/builder hiring or acting in the capacity of a project manager who employs sub-trades to undertake the work. These sub-trades generally use non-union labour whose rates of pay are determined by market forces.

Calgary experienced significant decreases in labour rates whereas Edmonton has remained relatively stable throughout 1991. Calgary's overall starts for 1989 and 1990 were 6000 and 7006 respectively and in 1991 they were 4744, a substantial reduction. This has meant that a market which supported a fairly large number of sub-trades has shrunk considerably creating an extremely competitive environment and consequently lower prices. In Edmonton, housing starts dropped substantially, but unlike Calgary's situation, the sub-trades remained active and pressures to reduce prices for the most part were felt less.

Materials

Material prices have dropped dramatically in both centres, Edmonton experiencing the least decrease at 7.1% and Calgary the highest at 10.3%. While the reduction has been experienced "across the board" there have been major drops in the prices of lumber, floor coverings (carpet and vinyl) and drywall. Lumber prices, it should be noted, vary considerably throughout the year and are generally at their highest in late spring/early summer, however 1991 saw prices significantly lower than in 1990.

The general decrease that has been experienced can be attributed to the economy. Lack of demand for materials in the major markets of Quebec and Ontario has increased competition for business country wide. This coupled with a decline in housing starts in Alberta of almost 30% compared to 1990 has meant that suppliers have had to reduce prices to remain competitive. Sub-trades have also had to cut their profit margins and this has been reflected in lower prices. The comments regarding labour that were made relative to Calgary are equally applicable to materials.

Apartment Construction

Following the downturn in 1981-82, construction of apartment buildings across Alberta was virtually non-existent. Only in recent years has activity recommenced in Calgary and Edmonton. Edmonton, in particular, has shown an impressive increase in new starts made-up of semi, row and apartment style building construction in both 1990 and 1991. The recent trends indicate many of the new starts for these types of buildings are for purchase as well as rental properties. Calgary, on the other hand, has experienced significant decreases from 1990 and 1989.

3.0 COMMENTARY

3.2 Highlights by Centre

Calgary

Total cost of construction	\$761,274
Cost per unit	\$31,720
Cost per square foot	\$38.09
Change from 1990	-8.5%
Difference in labour cost	-5.4%
Difference in material/equipment cost	-10.3%

Semi-detached, row and apartment starts were down significantly, showing a drop of almost 59%, which contributed to a major downturn in the overall new housing market. The downturn has generated lower labour and material rates as competition has become more emulous. Sub-trades are in fact competing for work in Red Deer and Edmonton.

Edmonton

Total cost of construction	\$783,830
Cost per unit	\$32,660
Cost per square foot	\$39.21
Change from 1990	-4.9%
Difference in labour cost	-1.1%
Difference in material/equipment cost	-7.1%

While semi-detached, row and apartment starts in Calgary for 1991 were down by 59% compared to 1990, in Edmonton they were up by over 12%. The overall effect on new multi-unit construction has been a total cost decrease of 4.9% which is less than the drop experienced in Calgary.

4.0 DETAILED COST ESTIMATES BY TRADE DIVISION FOR EACH CENTRE

DETAILED COST ESTIMATES FOR CALGARY

1991 ALBERTA HOUSE COST COMPARISON STUDY

NOVEMBER 1991

24 UNIT WALK-UP APARTMENT

CALGARY

CONSTRUCTION COST ESTIMATE

GROSS FLOOR AREA : 1857 m2

Item	Description	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
1.	EXCAVATION & BACKFILL								
1.1	Excavate for basement, wall footings, and bases.	891	m3	0.55	490	1.10	980	1.65	1,470
1.2	Backfill to basement walls, footings, and bases.	188	m3	0.75	141	3.00	564	3.75	705
1.3	Remove surplus excavated material from site.	703	m3	0.00	0	4.50	3,164	4.50	3,164
TOTAL - EXCAVATION & BACKFILL		2.88	/m2 GFA		631		4,708		5,339
2.	CONCRETE AND GRAVEL								
2.1.0	Cribbing including placing rebar and pouring concrete in footings (560 x 250mm) - subcontract.	222	m	6.16	1,368	1.46	324	7.62	1,692
2.1.1	Cribbing including placing rebar and pouring concrete in basement wall (1.2 m high) - subcontract	96	m	17.76	1,705	5.81	558	23.57	2,263
2.1	SUBTOTAL - CRIBBING	2.13	/m2 GFA		3,072		882		3,954
2.2	Reinforcing steel in footings and basement walls (material only).	1,652	kg	0.00	0	0.77	1,272	0.77	1,272
2.3	25 MPa concrete in 250 x 560 mm reinforced footings and bases.	32	m3	0.00	0	93.00	2,976	93.00	2,976

24 UNIT WALK-UP APARTMENT

CALGARY

CONSTRUCTION COST ESTIMATE

GROSS FLOOR AREA : 1857 m2

Item	Description	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
2.4	25 MPa concrete in 200 mm reinforced basement wall (material only).	26	m3	0.00	0	93.00	2,418	93.00	2,418
2.5	100 mm perforated plastic weeping tile in crushed gravel surround.	96	m	2.60	250	1.25	120	3.85	370
2.6	Two coats asphaltic emulsion on concrete walls.	159	m2	0.40	64	0.65	103	1.05	167
2.7	150 mm gravel or sand bed under slab on grade.	70	m3	3.90	273	16.00	1,120	19.90	1,393
2.8	4 Mil polyethylene vapour barrier on gravel or sand bed.	501	m2	0.90	451	0.28	140	1.18	591
2.9	150 x 150 mm welded wire mesh reinforcement to slab on grade (material only).	456	m2	0.00	0	2.33	1,062	2.33	1,062
2.10	90 mm concrete (20 MPa) in slab on grade.	456	m2	5.00	2,280	7.92	3,612	12.92	5,892
2.11	38 mm thick rigid insulation to concrete wall (basement).	117	m2	2.75	322	5.12	599	7.87	921
TOTAL - CONCRETE AND GRAVEL		11.32	/m2 GFA		6,711		14,305		21,016

24 UNIT WALK-UP APARTMENT

CALGARY

CONSTRUCTION COST ESTIMATE

GROSS FLOOR AREA : 1857 m2

Item	Description	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
3.	ROUGH CARPENTRY								
3.1.0	Material Only - No. 2 SPF or better:								
	- floor joists (38 x 235mm) - #1 spruce	3,900	m	0.00	0	2.05	7,995	2.05	7,995
	- built-up beam (3-38 x 235 mm)	800	m	0.00	0	1.90	1,520	1.90	1,520
	- built-up beam (2-38 x 235 mm)	340	m	0.00	0	1.90	646	1.90	646
	- roof joists (38 x 235 mm) - #1 spruce	1,400	m	0.00	0	2.05	2,870	2.05	2,870
	- framing (38 x 140 mm)	4,550	m	0.00	0	0.90	4,095	0.90	4,095
	- plate (38 x 140 mm)	1,240	m	0.00	0	0.90	1,116	0.90	1,116
	- cross bridging (38 x 38 mm)	790	m	0.00	0	0.35	277	0.35	277
	- framing (38 x 89 mm)	10,000	m	0.00	0	0.60	6,000	0.60	6,000
	- blocking (38 x 89 mm)	1,450	m	0.00	0	0.60	870	0.60	870
	- blocking (38 x 140 mm)	120	m	0.00	0	0.90	108	0.90	108
	- wall strapping (38 x 38 mm)	320	m	0.00	0	0.35	112	0.35	112
	- fascia (19 x 140 mm)	110	m	0.00	0	0.55	61	0.55	61
3.1.1	Material Only - Sheathing								
	19 mm plywood (floor underlay) 1432 m2	490	shts	0.00	0	15.00	7,350	15.00	7,350
	13 mm teatst (u/s of joist) 1368 m2	464	shts	0.00	0	8.50	3,944	8.50	3,944
	10 mm plywood (roof sheathing) 524 m2	180	shts	0.00	0	7.50	1,350	7.50	1,350
	13 mm plywood (wall sheathing protection board 350mm high) 19 m2	7	shts	0.00	0	12.00	84	12.00	84
	8 mm plywood (wall sheathing) 727 m2	260	shts	0.00	0	7.50	1,950	7.50	1,950
3.1	SUBTOTAL - FRAMING MATERIALS	21.73	/m2 GFA		0		40,347		40,347
3.2	90 x 238 mm wide R.S.I. 2.1 (R12) batt insulation (vertical eaves).	99	m	0.60	59	0.75	74	1.35	134
3.3	Stair - 6 flights @ (2x6x8 = 96 risers)								
	38 x 300 mm stringers	59	m	5.00	295	2.10	124	7.10	419
	38 x 235 mm treads	103	m	5.00	515	1.90	196	6.90	711
	6 x 275 mm fir plywood in risers	115	m	5.00	575	0.85	98	5.85	673

1991 ALBERTA HOUSE COST COMPARISON STUDY

NOVEMBER 1991

24 UNIT WALK-UP APARTMENT

CALGARY

CONSTRUCTION COST ESTIMATE

GROSS FLOOR AREA :

1857 m2

Item	Description	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
3.4	Labour Only - complete framing including installation of windows.	1,857	m2	21.50	39,926	0.00	0	21.50	39,926
TOTAL - ROUGH CARPENTRY		44.27	/m2 GFA		41,370		40,839		82,209
4.	ROOFING								
4.1	Built-up asphalt roofing complete with granular finish and flashing.	527	m2	15.30	8,063	11.70	6,166	27.00	14,229
4.2	R.S.I. 6 (R34) batt insulation in joist space.	527	m2	1.00	527	5.80	3,057	6.80	3,584
4.3	4 mil polyethylene vapour barrier.	580	m2	0.30	174	0.22	128	0.52	302
4.4	Prefinished flashing over window.	66	m	1.75	116	3.50	231	5.25	347
TOTAL - ROOFING		9.94	/m2 GFA		8,880		9,581		18,461
5.	WINDOWS AND DOORS								
5.1.0	Double-glazed wired glass sealed window in steel frame (size 2.4 x 2.55 m).	4	No.	0.00	0	1,000.00	4,000	1,000.00	4,000
5.1.1	Double-glazed sliding units in wood frame (size 2.4 x .9 m) including aluminum sliders, screen, and hardware.	6	No.	0.00	0	270.00	1,620	270.00	1,620

1991 ALBERTA HOUSE COST COMPARISON STUDY

NOVEMBER 1991

24 UNIT WALK-UP APARTMENT

CALGARY

CONSTRUCTION COST ESTIMATE

GROSS FLOOR AREA : 1857 m2

Item	Description	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
5.1.2	Double-glazed sliding units in wood frame (size 1.5 x .9 m) including aluminum sliders, screen, and hardware.	28	No.	0.00	0	200.00	5,600	200.00	5,600
5.1.3	Double-glazed sliding units in wood frame (size .9 x .9 m) including aluminum sliders, screen, and hardware.	3	No.	0.00	0	150.00	450	150.00	450
5.1	SUBTOTAL - WINDOWS	6.28	/m2 GFA		0		11,670		11,670
5.2.0	Double-glazed patio door in wood frame with aluminum cladding and including hardware (size 2.4 x 1.8 m).	18	No.	0.00	0	750.00	13,500	750.00	13,500
5.2.1	Exterior - Aluminum entrance and sidelight, (size 2.4 x 2.1 m overall) including .9 x 2.1 m aluminum glazed door c/w door closer, push and pull, lock and aluminum threshold.	2	No.	0.00	0	1,350.00	2,700	1,350.00	2,700
5.2	SUBTOTAL - EXTERIOR DOORS & SCREENS	8.72	/m2 GFA		0		16,200		16,200
TOTAL - WINDOWS AND DOORS		15.01	/m2 GFA		0		27,870		27,870
6.	EXTERIOR CLADDING								
6.1	Prefinished aluminum siding	98	m2	5.00	490	16.50	1,617	21.50	2,107
6.2	Stained dark-brown cedar siding 25 x 150 mm channel to column.	425	m	0.58	246	1.25	531	1.83	778

1991 ALBERTA HOUSE COST COMPARISON STUDY

NOVEMBER 1991

24 UNIT WALK-UP APARTMENT

CALGARY

CONSTRUCTION COST ESTIMATE

GROSS FLOOR AREA : 1857 m2

Item	Description	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
6.3	Stucco on wire mesh incl. building paper.	678	m2	12.50	8,475	6.10	4,136	18.60	12,611
6.4	24 ga. aluminum vented metal soffit c/w edge moulding.	59	m2	4.00	236	9.50	561	13.50	797
6.5	Parging to concrete walls.	29	m2	11.00	319	3.75	109	14.75	428
TOTAL - EXTERIOR CLADDING		9.00	/m2 GFA		9,767		6,953		16,720
7.	PLUMBING								
7.1	Complete plumbing rough-in & finishing including roof drains.	24	apt.	300.00	7,200	600.00	14,400	900.00	21,600
7.2	Complete plumbing fixtures including: - 24 No. water closets - 32 No. lavatory basins - 24 No. baths (5') - 1 No. mop service basin - 1 No. laundry tub (Crane or equal) - 24 No. kitchen sinks, S.S. compartment - 1 No. water heater and storage tank (300 MBH capacity)	24	apt.	500.00	12,000	1,020.00	24,480	1,520.00	36,480
TOTAL - PLUMBING		31.28	/m2 GFA		19,200		38,880		58,080

1991 ALBERTA HOUSE COST COMPARISON STUDY

NOVEMBER 1991

24 UNIT WALK-UP APARTMENT

CALGARY

CONSTRUCTION COST ESTIMATE

GROSS FLOOR AREA : 1857 m2

Item	Description	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
8.	ELECTRICAL								
8.1	Complete electrical installation including fixture supply: fixtures, receptacles and connections for TV, phone and washroom GFI; vent fan, door intercom access, 400 A main service board with 60 A panel to apartments.	24	apt.	750.00	18,000	1,250.00	30,000	2,000.00	48,000
8.2	Fire alarm system.	24	apt.	75.00	1,800	90.00	2,160	165.00	3,960
TOTAL - ELECTRICAL		27.98	/m2 GFA		19,800		32,160		51,960
9.	HEATING								
9.1	Hot water circulation system (268 m total length) c/w radiators, 24 control valves, one centrifugal circulation pump, complete with all piping, 50 gallon expansion tank, hot water heating boiler and gas supply system.	24	apt.	500.00	12,000	900.00	21,600	1,400.00	33,600
TOTAL - HEATING		18.09	/m2 GFA		12,000		21,600		33,600
10.	VENTILATION								
10.1	Ventilation system, complete for 24-unit apartment building with all ductwork and fans.	24	apt.	300.00	7,200	700.00	16,800	1,000.00	24,000
TOTAL - VENTILATION		12.92	/m2 GFA		7,200		16,800		24,000

1991 ALBERTA HOUSE COST COMPARISON STUDY

NOVEMBER 1991

24 UNIT WALK-UP APARTMENT

CALGARY

CONSTRUCTION COST ESTIMATE

GROSS FLOOR AREA : 1857 m2

Item	Description	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
11.	FIRE PROTECTION								
11.1	Fire protection system, complete for 24-unit apartment building.	24	apt.	39.00	936	65.00	1,560	104.00	2,496
TOTAL - FIRE PROTECTION		1.34	/m2 GFA		936		1,560		2,496
12.	SPECIALTY ITEMS								
12.1	Drapery tracks.	102	m	3.50	357	7.50	765	11.00	1,122
12.2.0	970 mm high metal balustrade to balconies c/w balusters 100 mm o.c.	98	m	13.70	1,343	51.30	5,027	65.00	6,370
12.2.1	Metal balustrade to stairs c/w vinyl cap.	66	m	13.70	904	56.30	3,716	70.00	4,620
12.2.2	50 mm dia. pipe handrail and brackets.	54	m	14.50	783	25.50	1,377	40.00	2,160
12.2	SUBTOTAL - METAL BALUSTRADE & HANDRAIL	7.08	/m2 GFA		3,030		10,120		13,150
TOTAL - SPECIALTY ITEMS		7.69	/m2 GFA		3,387		10,885		14,272
13.	DRYWALL, INSULATION & CAULKING								
13.1	Gypsum wallboard (13 mm standard) on walls, taped and sanded.	3,906	m2	3.00	11,718	2.30	8,984	5.30	20,702

1991 ALBERTA HOUSE COST COMPARISON STUDY

NOVEMBER 1991

24 UNIT WALK-UP APARTMENT

CALGARY

CONSTRUCTION COST ESTIMATE

GROSS FLOOR AREA : 1857 m2

Item	Description	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
13.2	Gypsum wallboard (13mm fire rated) taped and sanded. - walls 705 m2 - stair soffit 29 m2	734	m2	3.00	2,202	2.70	1,982	5.70	4,184
13.3	Gypsum wallboard (15.9 mm thick), taped and sanded.	487	m2	3.00	1,461	2.85	1,388	5.85	2,849
13.4	Gypsum wallboard (15.9 mm fire rated) to shaft enclosure, taped and sanded.	63	m2	4.00	252	2.85	180	6.85	432
13.5	Gypsum wallboard (19 mm) to shaft enclosure core.	63	m2	5.00	315	5.00	315	10.00	630
13.6	Gypsum wallboard (15.9 mm fire rated with sound barrier) on ceiling, taped and sanded.	1,887	m2	3.00	5,661	2.95	5,567	5.95	11,228
13.7	2 layers gypsum wallboard (15.9 mm fire rated with sound barrier) on ceiling,taped and sanded.	4	m2	4.95	20	5.75	23	10.70	43
13.8	Tentest board, Crane 3-183 Redcliffe	524	m2	1.30	681	2.80	1,467	4.10	2,148
13.9	Finish to ceilings - textured	1,425	m2	0.90	1,283	0.70	997	1.60	2,280
13.10	4 mil polyethylene vapour barrier.	1,346	m2	0.30	404	0.22	296	0.52	700
13.11	Batt insulation RSI - 3.5 (R20) to exterior walls.	728	m2	0.95	692	3.80	2,766	4.75	3,458

1991 ALBERTA HOUSE COST COMPARISON STUDY

NOVEMBER 1991

24 UNIT WALK-UP APARTMENT

CALGARY

CONSTRUCTION COST ESTIMATE

GROSS FLOOR AREA : 1857 m2

Item	Description	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
13.12	Batt insulation RSI - 3.5 (R20) to interior walls.	908	m2	0.95	863	3.80	3,450	4.75	4,313
13.13	Caulk (exterior) (exterior doors, windows, junction of siding and concrete).	725	m	0.40	290	0.30	218	0.70	508
13.14	Caulk (interior) - ceramic tile	227	m	0.85	193	0.40	91	1.25	284
TOTAL - DRYWALL, INSULATION & CAULKING		26.95	/m2 GFA		26,033		27,724		63,757
14.	CABINETS & VANITIES								
14.1.0	Vanities and base cabinets c/w drawers, shelves, etc.- supply.	96	m	0.00	0	250.00	24,000	250.00	24,000
14.1.1	Kitchen wall cabinets - supply.	99	m	0.00	0	150.00	14,850	150.00	14,850
14.1.2	Countertops - supply.	96	m	0.00	0	60.00	5,760	60.00	5,760
14.1	SUBTOTAL - CABINETRY SUPPLY	24.02	/m2 GFA		0		44,610		44,610
14.2	Installation Labour	24	apt.	200.00	4,800	0.00	0	200.00	4,800
TOTAL - CABINETS & VANITIES		26.61	/m2 GFA		4,800		44,610		49,410

24 UNIT WALK-UP APARTMENT

CALGARY

CONSTRUCTION COST ESTIMATE

GROSS FLOOR AREA : 1857 m2

Item	Description	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
15.	INTERIOR FINISHING								
15.1.0	Interior - Aluminum entrance and sidelight, (size 2.4 x 2.1 m overall) including .9 x 2.1 m aluminum glazed door c/w door closer, push and pull, lock and aluminum threshold.	1	No.	0.00	0	1,350.00	1,350	1,350.00	1,350
15.1.1	Fire rated door and sidelight with 0.9 x 2.1 m, 20 min. labelled wood door and pressed steel frame including hardware and 6 mm wire glass to sidelight								
	- 1.9 x 2.1 m	4	No.	0.00	0	1,200.00	4,800	1,200.00	4,800
	- 1.4 x 2.1 m	4	No.	0.00	0	1,100.00	4,400	1,100.00	4,400
15.1.2	Solid core door and frame, ribbon cut mahogany								
	- .9 x 2.1m x 44mm (20 min. label)	24	No.	0.00	0	175.00	4,200	175.00	4,200
	- .85 x 2.1m x 44mm	26	No.	0.00	0	175.00	4,550	175.00	4,550
15.1.3	Solid core door and frame, ribbon cut mahogany								
	- .9 x 2.1m x 44mm (45 min. label)	1	No.	0.00	0	190.00	190	190.00	190
15.1.4	Hollow core door and frame, ribbon cut mahogany face								
	- .70 x 2.0 m x 35mm	24	No.	0.00	0	57.00	1,368	57.00	1,368
	- .75 x 2.0 m x 35mm	24	No.	0.00	0	57.00	1,368	57.00	1,368
15.1.5	Metal door labelled (1 hour) c/w fire rated pressed steel frame								
	- .9 x 2.1 m x 45 mm	1	No.	0.00	0	225.00	225	225.00	225

24 UNIT WALK-UP APARTMENT

CALGARY

CONSTRUCTION COST ESTIMATE

GROSS FLOOR AREA : 1857 m2

Item	Description	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
15.1.6	Metal folding bi-fold doors, with tracks and pulls								
	- 1.8 x 2.0 m	28	No.	0.00	0	140.00	3,920	140.00	3,920
	- 1.5 x 2.0 m	14	No.	0.00	0	130.00	1,820	130.00	1,820
	- 1.2 x 2.0 m	6	No.	0.00	0	120.00	720	120.00	720
	- 0.9 x 2.0 m	14	No.	0.00	0	70.00	980	70.00	980
	- 0.6 x 2.0 m	16	No.	0.00	0	60.00	960	60.00	960
15.1	SUBTOTAL - INTERIOR DOORS & SCREENS	16.61	/m2 GFA		0		30,851		30,851
15.2	Select grade fir in window and door trim and base (40 x 12 mm)								
	- window 431 m								
	- door 555 m								
	- base 2328 m	3,314	m	0.00	0	0.95	3,148	0.95	3,148
15.3.0	Lock sets to interior doors.	25	set	0.00	0	27.00	675	27.00	675
15.3.1	Butts to interior doors. (included with frames)	129	pair	0.00	0	0.00	0	0.00	0
15.3.2	Latch sets.	81	set	0.00	0	13.00	1,053	13.00	1,053
15.3.3	Bathroom privacy latch sets.	24	set	0.00	0	16.50	396	16.50	396
15.3.4	Door closers (rated).	14	No.	0.00	0	58.00	812	58.00	812
15.3	SUBTOTAL - DOOR HARDWARE	1.58	/m2 GFA		0		2,936		2,936

1991 ALBERTA HOUSE COST COMPARISON STUDY

NOVEMBER 1991

24 UNIT WALK-UP APARTMENT

CALGARY

CONSTRUCTION COST ESTIMATE

GROSS FLOOR AREA : 1857 m2

Item	Description	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
15.4.0	Washroom accessories - 24 No. toilet paperholders - 24 No. soap dishes - 48 No. towel bars	96	No.	0.00	0	7.00	672	7.00	672
15.4.1	Medicine cabinet	24	No.	0.00	0	75.00	1,800	75.00	1,800
15.4.2	25 mm dia. chrome shower curtain rod.	24	No.	0.00	0	7.00	168	7.00	168
15.4.3	18 mm dia. chrome coat rods.	24	No.	0.00	0	6.00	144	6.00	144
15.4	SUBTOTAL - WASHROOM ACCESSORIES, ETC.	1.50	/m2 GFA		0		2,784		2,784
15.5	Mail box and apartment numbers (size 810 x 450 mm) for 24 apts.	i	set	0.00	0	450.00	450	450.00	450
15.6	Shelving - Douglas fir plywood, lipped one edge (450 mm x 20 mm thick).	107	m	0.00	0	10.00	1,070	10.00	1,070
15.7	Finishing Labour	24	apt.	550.00	13,200	0.00	0	550.00	13,200
TOTAL - INTERIOR FINISHING		29.32	/m2 GFA		13,200		41,239		54,439
16.	PAINTING, STAIN & LACQUER								
16.1.0	Interior work - Prepare, one coat primer sealer, one coat latex or semigloss paint on gypsum wallboard - walls 4962 m2 - ceiling 234 m2	5,196	m2	1.80	9,353	0.70	3,637	2.50	12,990

24 UNIT WALK-UP APARTMENT

CALGARY

CONSTRUCTION COST ESTIMATE

GROSS FLOOR AREA : 1857 m2

Item	Description	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
16.1.1	Two coats urethane varnish on doors and frames.	105	No.	25.00	2,625	10.00	1,050	35.00	3,675
16.1.2	Prepare, prime, one coat semigloss on base, door and window trim.	2,328	m	0.80	1,862	0.25	582	1.05	2,444
16.1.3	Prepare, prime, one coat semigloss on shelving.	94	m2	2.00	188	0.70	66	2.70	254
16.1	SUBTOTAL - INTERIOR PAINTING	10.43	/m2 GFA		14,028		5,335		19,363
16.2.0	Exterior work - Prepare, prime, two coats enamel on fascia board to balconies and entrance canopy.	26	m2	2.00	52	0.70	18	2.70	70
16.2.1	Prepare, prime, two coats enamel on metal handrail and balustrade.	783	m	1.00	783	0.50	392	1.50	1,175
16.2	SUBTOTAL - EXTERIOR PAINTING	0.67	/m2 GFA		835		410		1,245
TOTAL - PAINTING, STAIN & LACQUER		11.10	/m2 GFA		14,863		5,745		20,608
17.	FLOOR COVERINGS								
17.1	32 oz, 100% Nylon carpet c/w 13 mm thick chip foam underlay.	1,296	m2	4.50	5,832	18.80	24,365	23.30	30,197
17.2	Sheet vinyl flooring (.065 gauge) with adhesive to subfloor.	364	m2	6.00	2,184	9.00	3,276	15.00	5,460

1991 ALBERTA HOUSE COST COMPARISON STUDY

NOVEMBER 1991

24 UNIT WALK-UP APARTMENT

CALGARY

CONSTRUCTION COST ESTIMATE

GROSS FLOOR AREA : 1857 m2

Item	Description	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
17.3	Gypcrete floor topping including steel trowel finish.	1,338	m2	6.40	8,563	3.10	4,148	9.50	12,711
17.4	'Neoprene Hypalon' waterproofing or equal to balcony.	67	m2	17.00	1,139	21.00	1,407	38.00	2,546
TOTAL - FLOOR COVERINGS		27.42	/m2 GFA		17,718		33,196		50,914
18.	CERAMIC TILE								
18.1	Ceramic tile 100 x 100 x 6 mm thinset on drywall.	137	m2	25.00	3,425	15.00	2,055	40.00	5,480
TOTAL - CERAMIC TILE		2.95	/m2 GFA		3,425		2,055		5,480
19.	APPLIANCES								
19.1	Freestanding range, 760 mm (30") high, four surface elements, oven auto timer.	24	No.	20.00	480	550.00	13,200	570.00	13,680
19.2	Refrigerator, frost free .42 m3 (15 cu. ft.) capacity.	24	No.	20.00	480	650.00	15,600	670.00	16,080
19.3	Coin operated dryer.	2	No.	20.00	40	660.00	1,320	680.00	1,360
19.4	Coin operated washer.	2	No.	20.00	40	900.00	1,800	920.00	1,840
19.5	Range hood	24	No.	20.00	480	75.00	1,800	95.00	2,280
TOTAL - APPLIANCES		18.98	/m2 GFA		1,520		33,720		35,240

24 UNIT WALK-UP APARTMENT

CALGARY

CONSTRUCTION COST ESTIMATE

GROSS FLOOR AREA : 1857 m2

Item	Description	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
20.	SITE OVERHEAD								
20.1	Mobilization	24	apt.	0.00	0	0.00	0	0.00	0
20.2	Supervision	24	apt.	1,000.00	24,000	0.00	0	1,000.00	24,000
20.3	Survey	24	apt.	62.50	1,500	0.00	0	62.50	1,500
20.4	Site Office	24	apt.	0.00	0	62.50	1,500	62.50	1,500
20.5	Rentals	24	apt.	0.00	0	125.00	3,000	125.00	3,000
20.6	Small Tools	24	apt.	0.00	0	62.50	1,500	62.50	1,500
20.7	Security	24	apt.	0.00	0	0.00	0	0.00	0
20.8	Hoarding	24	apt.	0.00	0	41.67	1,000	41.67	1,000
20.9	Garbage Removal	24	apt.	0.00	0	83.33	2,000	83.33	2,000
20.10	Cleaning	24	apt.	416.67	10,000	0.00	0	416.67	10,000
TOTAL - SITE OVERHEAD		23.96	/m2 GFA		35,500		9,000		44,500

1991 ALBERTA HOUSE COST COMPARISON STUDY

NOVEMBER 1991

24 UNIT WALK-UP APARTMENT

CALGARY

CONSTRUCTION COST ESTIMATE

GROSS FLOOR AREA : 1857 m2

Item	Description	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
21.	GENERAL CONTRACTOR'S OVERHEAD & PROFIT								
21.1	Permits	24	apt.	0.00	0	145.83	3,500	145.83	3,500
21.2	Bonding & Insurance	24	apt.	0.00	0	208.33	5,000	208.33	5,000
21.3	Office Overhead	24	apt.	333.33	8,000	191.67	4,600	525.00	12,600
21.4	Profit	24	apt.	583.33	14,000	250.00	6,000	833.33	20,000
TOTAL - GENERAL CONTRACTOR'S OVERHEAD & PROFIT		22.13	/m2 GFA		22,000		19,100		41,100
SUBTOTAL - CALGARY					\$268,941		\$442,530		\$711,471
GOODS & SERVICES TAX					\$18,826		\$30,977		49,803
TOTAL - CALGARY		409.95	/m2 GFA		\$287,767		\$473,507		\$761,274

DETAILED COST ESTIMATES FOR EDMONTON

1991 ALBERTA HOUSE COST COMPARISON STUDY

NOVEMBER 1991

24 UNIT WALK-UP APARTMENT

EDMONTON

CONSTRUCTION COST ESTIMATE

GROSS FLOOR AREA : 1857 m2

Item	Description	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
1.	EXCAVATION & BACKFILL								
1.1	Excavate for basement, wall footings, and bases.	891	m3	0.60	535	1.10	980	1.70	1,515
1.2	Backfill to basement walls, footings, and bases.	188	m3	0.70	132	3.40	639	4.10	771
1.3	Remove surplus excavated material from site.	703	m3	0.00	0	4.50	3,164	4.50	3,164
TOTAL - EXCAVATION & BACKFILL		2.93	/m2 GFA		666		4,783		5,449
2.	CONCRETE AND GRAVEL								
2.1.0	Cribbing including placing rebar and pouring concrete in footings (560 x 250mm) - subcontract.	222	m	6.50	1,443	1.50	333	8.00	1,776
2.1.1	Cribbing including placing rebar and pouring concrete in basement wall (1.2 m high) - subcontract	96	m	18.00	1,728	6.00	576	24.00	2,304
2.1	SUBTOTAL - CRIBBING	2.20	/m2 GFA		3,171		909		4,080
2.2	Reinforcing steel in footings and basement walls (material only).	1,652	kg	0.00	0	0.80	1,322	0.80	1,322
2.3	25 MPa concrete in 250 x 560 mm reinforced footings and bases.	32	m3	0.00	0	102.00	3,264	102.00	3,264

24 UNIT WALK-UP APARTMENT

EDMONTON

CONSTRUCTION COST ESTIMATE

GROSS FLOOR AREA : 1857 m2

Item	Description	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
2.4	25 MPa concrete in 200 mm reinforced basement wall (material only).	26	m3	0.00	0	102.00	2,652	102.00	2,652
2.5	100 mm perforated plastic weeping tile in crushed gravel surround.	96	m	2.75	264	1.25	120	4.00	384
2.6	Two coats asphaltic emulsion on concrete walls.	159	m2	0.45	72	0.65	103	1.10	175
2.7	150 mm gravel or sand bed under slab on grade.	70	m3	4.00	280	16.50	1,155	20.50	1,435
2.8	4 Mil polyethylene vapour barrier on gravel or sand bed.	501	m2	0.90	451	0.28	140	1.18	591
2.9	150 x 150 mm welded wire mesh reinforcement to slab on grade (material only).	456	m2	0.00	0	2.40	1,094	2.40	1,094
2.10	90 mm concrete (20 MPa) in slab on grade.	456	m2	5.00	2,280	8.64	3,940	13.64	6,220
2.11	38 mm thick rigid insulation to concrete wall (basement).	117	m2	2.80	328	5.12	599	7.92	927
TOTAL - CONCRETE AND GRAVEL		11.92	/m2 GFA		6,845		15,299		22,144

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24 UNIT WALK-UP APARTMENT

EDMONTON

CONSTRUCTION COST ESTIMATE

GROSS FLOOR AREA : 1857 m2

Item	Description	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
3.	ROUGH CARPENTRY								
3.1.0	Material Only - No. 2 SPF or better:								
	- floor joists (38 x 235mm) - #1 spruce	3,900	m	0.00	0	2.30	8,970	2.30	8,970
	- built-up beam (3-38 x 235 mm)	800	m	0.00	0	2.10	1,680	2.10	1,680
	- built-up beam (2-38 x 235 mm)	340	m	0.00	0	2.10	714	2.10	714
	- roof joists (38 x 235 mm) - #1 spruce	1,400	m	0.00	0	2.30	3,220	2.30	3,220
	- framing (38 x 140 mm)	4,550	m	0.00	0	0.88	4,004	0.88	4,004
	- plate (38 x 140 mm)	1,240	m	0.00	0	0.88	1,091	0.88	1,091
	- cross bridging (38 x 38 mm)	790	m	0.00	0	0.35	277	0.35	277
	- framing (38 x 89 mm)	10,000	m	0.00	0	0.63	6,300	0.63	6,300
	- blocking (38 x 89 mm)	1,450	m	0.00	0	0.63	914	0.63	914
	- blocking (38 x 140 mm)	120	m	0.00	0	0.88	106	0.88	106
	- wall strapping (38 x 38 mm)	320	m	0.00	0	0.35	112	0.35	112
	- fascia (19 x 140 mm)	110	m	0.00	0	0.50	55	0.50	55
3.1.1	Material Only - Sheathing								
	19 mm plywood (floor underlay) 1432 m2	490	shts	0.00	0	16.00	7,840	16.00	7,840
	13 mm tentest (u/s of joist) 1368 m2	464	shts	0.00	0	8.50	3,944	8.50	3,944
	10 mm plywood (roof sheathing) 524 m2	180	shts	0.00	0	8.50	1,530	8.50	1,530
	13 mm plywood (wall sheathing protection board 350mm high) 19 m2	7	shts	0.00	0	12.50	88	12.50	88
	8 mm plywood (wall sheathing) 727 m2	260	shts	0.00	0	8.50	2,210	8.50	2,210
3.1	SUBTOTAL - FRAMING MATERIALS	23.18	/m2 GFA		0		43,053		43,053
3.2	90 x 238 mm wide R.S.I. 2.1 (R12) batt insulation (vertical eaves).	99	m	0.60	59	0.75	74	1.35	134
3.3	Stair - 6 flights @ (2x6x8 = 96 risers)								
	38 x 300 mm stringers	59	m	5.00	295	2.30	136	7.30	431
	38 x 235 mm treads	103	m	5.00	515	2.10	216	7.10	731
	6 x 275 mm fir plywood in risers	115	m	5.00	575	0.90	104	5.90	679

24 UNIT WALK-UP APARTMENT

EDMONTON

CONSTRUCTION COST ESTIMATE

GROSS FLOOR AREA : 1857 m2

Item	Description	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
3.4	Labour Only - complete framing including installation of windows.	1,857	m2	22.00	40,854	0.00	0	22.00	40,854
TOTAL - ROUGH CARPENTRY		48.25	/m2 GFA		42,296		43,583		85,881
4.	ROOFING								
4.1	Built-up asphalt roofing complete with granular finish and flashing.	527	m2	13.00	6,851	10.00	5,270	23.00	12,121
4.2	R.S.I. 6 (R34) batt insulation in joist space.	527	m2	1.00	527	5.70	3,004	6.70	3,531
4.3	4 mil polyethylene vapour barrier.	580	m2	0.30	174	0.22	128	0.52	302
4.4	Prefinished flashing over window.	66	m	1.70	112	3.30	218	5.00	330
TOTAL - ROOFING		8.77	/m2 GFA		7,664		8,619		16,283
5.	WINDOWS AND DOORS								
5.1.0	Double-glazed wired glass sealed window in steel frame (size 2.4 x 2.55 m).	4	No.	0.00	0	1,150.00	4,600	1,150.00	4,600
5.1.1	Double-glazed sliding units in wood frame (size 2.4 x .9 m) including aluminum sliders, screen, and hardware.	6	No.	0.00	0	300.00	1,800	300.00	1,800

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CONSTRUCTION COST ESTIMATE

GROSS FLOOR AREA :

1857 m2

Item	Description	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
5.1.2	Double-glazed sliding units in wood frame (size 1.5 x .9 m) including aluminum sliders, screen, and hardware.	28	No.	0.00	0	220.00	6,160	220.00	6,160
5.1.3	Double-glazed sliding units in wood frame (size .9 x .9 m) including aluminum sliders, screen, and hardware.	3	No.	0.00	0	165.00	495	165.00	495
5.1	SUBTOTAL - WINDOWS	7.03	/m2 GFA		0		13,055		13,055
5.2.0	Double-glazed patio door in wood frame with aluminum cladding and including hardware (size 2.4 x 1.8 m).	18	No.	0.00	0	900.00	16,200	900.00	16,200
5.2.1	Exterior - Aluminum entrance and sidelight, (size 2.4 x 2.1 m overall) including .9 x 2.1 m aluminum glazed door c/w door closer, push and pull, lock and aluminum threshold.	2	No.	0.00	0	1,500.00	3,000	1,500.00	3,000
5.2	SUBTOTAL - EXTERIOR DOORS & SCREENS	10.34	/m2 GFA		0		19,200		19,200
TOTAL - WINDOWS AND DOORS		17.37	/m2 GFA		0		32,255		32,255
6.	EXTERIOR CLADDING								
6.1	Prefinished aluminum siding	98	m2	4.90	480	16.00	1,568	20.90	2,048
6.2	Stained dark-brown cedar siding 25 x 150 mm channel to column.	425	m	0.60	255	1.25	531	1.85	786

24 UNIT WALK-UP APARTMENT

EDMONTON

CONSTRUCTION COST ESTIMATE

GROSS FLOOR AREA : 1857 m2

Item	Description	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
6.3	Stucco on wire mesh incl. building paper.	678	m2	12.00	8,136	5.95	4,034	17.95	12,170
6.4	24 ga. aluminum vented metal soffit c/w edge moulding.	59	m2	3.50	207	9.00	531	12.50	738
6.5	Parging to concrete walls.	29	m2	11.50	334	4.50	131	16.00	464
TOTAL - EXTERIOR CLADDING		8.73	/m2 GFA		9,411		6,795		16,206
7.	PLUMBING								
7.1	Complete plumbing rough-in & finishing including roof drains.	24	apt.	350.00	8,400	650.00	15,600	1,000.00	24,000
7.2	Complete plumbing fixtures including: - 24 No. water closets - 32 No. lavatory basins - 24 No. baths (5') - 1 No. mop service basin - 1 No. laundry tub (Crane or equal) - 24 No. kitchen sinks, S.S. compartment - 1 No. water heater and storage tank (300 MBH capacity)	24	apt.	590.00	14,160	1,090.00	26,160	1,680.00	40,320
TOTAL - PLUMBING		34.64	/m2 GFA		22,560		41,760		64,320

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24 UNIT WALK-UP APARTMENT

EDMONTON

CONSTRUCTION COST ESTIMATE

GROSS FLOOR AREA : 1857 m2

Item	Description	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
8.	ELECTRICAL								
8.1	Complete electrical installation including fixture supply: fixtures, receptacles and connections for TV, phone and washroom GFI; vent fan, door intercom access, 400 A main service board with 60 A panel to apartments.	24	apt.	900.00	21,600	1,300.00	31,200	2,200.00	52,800
8.2	Fire alarm system.	24	apt.	75.00	1,800	90.00	2,160	165.00	3,960
TOTAL - ELECTRICAL		30.57	/m2 GFA		23,400		33,360		56,760
9.	HEATING								
9.1	Hot water circulation system (268 m total length) c/w radiators, 24 control valves, one centrifugal circulation pump, complete with all piping, 50 gallon expansion tank, hot water heating boiler and gas supply system.	24	apt.	550.00	13,200	1,000.00	24,000	1,550.00	37,200
TOTAL - HEATING		20.03	/m2 GFA		13,200		24,000		37,200
10.	VENTILATION								
10.1	Ventilation system, complete for 24-unit apartment building with all ductwork and fans.	24	apt.	300.00	7,200	700.00	16,800	1,000.00	24,000
TOTAL - VENTILATION		12.92	/m2 GFA		7,200		16,800		24,000

24 UNIT WALK-UP APARTMENT

EDMONTON

CONSTRUCTION COST ESTIMATE

GROSS FLOOR AREA : 1857 m2

Item	Description	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
11.	FIRE PROTECTION								
11.1	Fire protection system, complete for 24-unit apartment building.	24	apt.	45.00	1,080	70.00	1,680	115.00	2,760
TOTAL - FIRE PROTECTION		1.49	/m2 GFA		1,080		1,680		2,760
12.	SPECIALTY ITEMS								
12.1	Drapery tracks.	102	m	3.50	357	7.00	714	10.50	1,071
12.2.0	970 mm high metal balustrade to balconies c/w balusters 100 mm o.c.	98	m	12.50	1,225	46.50	4,557	59.00	5,782
12.2.1	Metal balustrade to stairs c/w vinyl cap.	66	m	13.90	917	57.10	3,769	71.00	4,686
12.2.2	50 mm dia. pipe handrail and brackets.	54	m	11.80	637	20.70	1,118	32.50	1,755
12.2	SUBTOTAL - METAL BALUSTRADE & HANDRAIL	6.58	/m2 GFA		2,780		9,443		12,223
TOTAL - SPECIALTY ITEMS		7.16	/m2 GFA		3,137		10,157		13,294
13.	DRYWALL, INSULATION & CAULKING								
13.1	Gypsum wallboard (13 mm standard) on walls, taped and sanded.	3,906	m2	3.10	12,109	2.30	8,984	5.40	21,092

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24 UNIT WALK-UP APARTMENT

EDMONTON

CONSTRUCTION COST ESTIMATE

GROSS FLOOR AREA : 1857 m2

Item	Description	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
13.2	Gypsum wallboard (13mm fire rated) taped and sanded. - walls 705 m2 - stair soffit 29 m2	734	m2	3.10	2,275	2.70	1,982	5.80	4,257
13.3	Gypsum wallboard (15.9 mm thick), taped and sanded.	487	m2	3.10	1,510	2.85	1,388	5.95	2,898
13.4	Gypsum wallboard (15.9 mm fire rated) to shaft enclosure, taped and sanded.	63	m2	4.10	258	2.85	180	6.95	438
13.5	Gypsum wallboard (19 mm) to shaft enclosure core.	63	m2	5.20	328	5.00	315	10.20	643
13.6	Gypsum wallboard (15.9 mm fire rated with sound barrier) on ceiling, taped and sanded.	1,887	m2	3.10	5,850	2.95	5,567	6.05	11,416
13.7	2 layers gypsum wallboard (15.9 mm fire rated with sound barrier) on ceiling,taped and sanded.	4	m2	5.00	20	5.75	23	10.75	43
13.8	Tentest board, Crane 3-183 Redcliffe	524	m2	1.40	734	2.80	1,467	4.20	2,201
13.9	Finish to ceilings - textured	1,425	m2	0.90	1,283	0.75	1,069	1.65	2,351
13.10	4 mil polyethylene vapour barrier.	1,346	m2	0.30	404	0.22	296	0.52	700
13.11	Batt insulation RSI - 3.5 (R20) to exterior walls.	728	m2	0.95	692	3.70	2,694	4.65	3,385

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CONSTRUCTION COST ESTIMATE

GROSS FLOOR AREA : 1857 m2

Item	Description	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
13.12	Batt insulation RSI - 3.5 (R20) to interior walls.	908	m2	0.95	863	3.70	3,360	4.65	4,222
13.13	Caulk (exterior) (exterior doors, windows, junction of siding and concrete).	725	m	0.45	326	0.30	218	0.75	544
13.14	Caulk (interior) - ceramic tile	227	m	0.85	193	0.40	91	1.25	284
TOTAL - DRYWALL, INSULATION & CAULKING		29.33	/m2 GFA		26,843		27,631		54,474
14.	CABINETS & VANITIES								
14.1.0	Vanities and base cabinets c/w drawers, shelves, etc. - supply.	96	m	0.00	0	240.00	23,040	240.00	23,040
14.1.1	Kitchen wall cabinets - supply.	99	m	0.00	0	145.00	14,355	145.00	14,355
14.1.2	Countertops - supply.	96	m	0.00	0	60.00	5,760	60.00	5,760
14.1	SUBTOTAL - CABINETRY SUPPLY	23.24	/m2 GFA		0		43,155		43,155
14.2	Installation Labour	24	apt.	220.00	5,280	0.00	0	220.00	5,280
TOTAL - CABINETS & VANITIES		26.08	/m2 GFA		5,280		43,155		48,435

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EDMONTON

CONSTRUCTION COST ESTIMATE

GROSS FLOOR AREA : 1857 m2

Item	Description	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
15.	INTERIOR FINISHING								
15.1.0	Interior - Aluminum entrance and sidelight, (size 2.4 x 2.1 m overall) Including .9 x 2.1 m aluminum glazed door c/w door closer, push and pull, lock and aluminum threshold.	1	No.	0.00	0	1,500.00	1,500	1,500.00	1,500
15.1.1	Fire rated door and sidelight with 0.9 x 2.1 m, 20 min. labelled wood door and pressed steel frame including hardware and 6 mm wire glass to sidelight								
	- 1.9 x 2.1 m	4	No.	0.00	0	1,210.00	4,840	1,210.00	4,840
	- 1.4 x 2.1 m	4	No.	0.00	0	1,150.00	4,600	1,150.00	4,600
15.1.2	Solid core door and frame, ribbon cut mahogany								
	- .9 x 2.1m x 44mm (20 min. label)	24	No.	0.00	0	180.00	4,320	180.00	4,320
	- .85 x 2.1m x 44mm	26	No.	0.00	0	180.00	4,680	180.00	4,680
15.1.3	Solid core door and frame, ribbon cut mahogany								
	- .9 x 2.1m x 44mm (45 min. label)	1	No.	0.00	0	190.00	190	190.00	190
15.1.4	Hollow core door and frame, ribbon cut mahogany face								
	- .70 x 2.0 m x 35mm	24	No.	0.00	0	58.00	1,392	58.00	1,392
	- .75 x 2.0 m x 35mm	24	No.	0.00	0	58.00	1,392	58.00	1,392
15.1.5	Metal door labelled (1 hour) c/w fire rated pressed steel frame								
	- .9 x 2.1 m x 45 mm	1	No.	0.00	0	227.00	227	227.00	227

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EDMONTON

CONSTRUCTION COST ESTIMATE

GROSS FLOOR AREA : 1857 m2

Item	Description	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
15.1.6	Metal folding bi-fold doors, with tracks and pulls								
	- 1.8 x 2.0 m	28	No.	0.00	0	143.00	4,004	143.00	4,004
	- 1.5 x 2.0 m	14	No.	0.00	0	132.00	1,848	132.00	1,848
	- 1.2 x 2.0 m	6	No.	0.00	0	121.00	726	121.00	726
	- 0.9 x 2.0 m	14	No.	0.00	0	71.00	994	71.00	994
	- 0.6 x 2.0 m	16	No.	0.00	0	62.00	992	62.00	992
15.1	SUBTOTAL - INTERIOR DOORS & SCREENS	17.07	/m2 GFA		0		31,705		31,705
15.2	Select grade fir in window and door trim and base (40 x 12 mm)								
	- window 431 m								
	- door 555 m								
	- base 2328 m	3,314	m	0.00	0	0.95	3,148	0.95	3,148
15.3.0	Lock sets to interior doors.	25	set	0.00	0	26.00	650	26.00	650
15.3.1	Butts to interior doors. (Included with frames)	129	pair	0.00	0	0.00	0	0.00	0
15.3.2	Latch sets.	81	set	0.00	0	14.50	1,175	14.50	1,175
15.3.3	Bathroom privacy latch sets.	24	set	0.00	0	17.50	420	17.50	420
15.3.4	Door closers (rated).	14	No.	0.00	0	60.00	840	60.00	840
15.3	SUBTOTAL - DOOR HARDWARE	1.66	/m2 GFA		0		3,085		3,085

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CONSTRUCTION COST ESTIMATE

GROSS FLOOR AREA : 1857 m2

Item	Description	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
15.4.0	Washroom accessories - 24 No. toilet paperholders - 24 No. soap dishes - 48 No. towel bars	96	No.	0.00	0	7.00	672	7.00	672
15.4.1	Medicine cabinet	24	No.	0.00	0	75.00	1,800	75.00	1,800
15.4.2	25 mm dia. chrome shower curtain rod.	24	No.	0.00	0	6.00	144	6.00	144
15.4.3	18 mm dia. chrome coat rods.	24	No.	0.00	0	5.00	120	5.00	120
15.4	SUBTOTAL - WASHROOM ACCESSORIES, ETC.	1.47	/m2 GFA		0		2,736		2,736
15.5	Mail box and apartment numbers (size 810 x 450 mm) for 24 apts.	1	set	0.00	0	450.00	450	450.00	450
15.6	Shelving - Douglas fir plywood, lipped one edge (450 mm x 20 mm thick).	107	m	0.00	0	10.00	1,070	10.00	1,070
15.7	Finishing Labour	24	apt.	520.00	12,480	0.00	0	520.00	12,480
TOTAL - INTERIOR FINISHING		29.44	/m2 GFA		12,480		42,194		54,674
16.	PAINTING, STAIN & LACQUER								
16.1.0	Interior work - Prepare, one coat primer sealer, one coat latex or semigloss paint on gypsum wallboard - walls 4962 m2 - ceiling 234 m2	5,196	m2	1.80	9,353	0.70	3,637	2.50	12,990

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CONSTRUCTION COST ESTIMATE

GROSS FLOOR AREA : 1857 m2

Item	Description	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
16.1.1	Two coats urethane varnish on doors and frames.	105	No.	25.00	2,625	10.00	1,050	35.00	3,675
16.1.2	Prepare, prime, one coat semigloss on base, door and window trim.	2,328	m	0.80	1,862	0.25	582	1.05	2,444
16.1.3	Prepare, prime, one coat semigloss on shelving.	94	m2	2.00	188	0.70	66	2.70	254
16.1	SUBTOTAL - INTERIOR PAINTING	10.43	/m2 GFA		14,028		5,335		19,363
16.2.0	Exterior work - Prepare, prime, two coats enamel on fascia board to balconies and entrance canopy.	26	m2	2.15	56	0.70	18	2.85	74
16.2.1	Prepare, prime, two coats enamel on metal handrail and balustrade.	783	m	1.10	861	0.50	392	1.60	1,253
16.2	SUBTOTAL - EXTERIOR PAINTING	0.71	/m2 GFA		917		410		1,327
TOTAL - PAINTING, STAIN & LACQUER		11.14	/m2 GFA		14,945		5,745		20,690
17.	FLOOR COVERINGS								
17.1	32 oz, 100% Nylon carpet c/w 13 mm thick chip foam underlay.	1,296	m2	4.50	5,832	18.10	23,458	22.60	29,290
17.2	Sheet vinyl flooring (.065 gauge) with adhesive to subfloor.	364	m2	6.00	2,184	9.00	3,276	15.00	5,460

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CONSTRUCTION COST ESTIMATE

GROSS FLOOR AREA : 1857 m2

Item	Description	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
17.3	Gypcrete floor topping including steel trowel finish.	1,338	m2	6.40	8,563	3.10	4,148	9.50	12,711
17.4	'Neoprene Hypalon' waterproofing or equal to balcony.	67	m2	17.00	1,139	21.00	1,407	38.00	2,546
TOTAL - FLOOR COVERINGS		26.93	/m2 GFA		17,718		32,288		50,006
18.	CERAMIC TILE								
18.1	Ceramic tile 100 x 100 x 6 mm thinset on drywall.	137	m2	25.00	3,425	15.00	2,055	40.00	5,480
TOTAL - CERAMIC TILE		2.95	/m2 GFA		3,425		2,055		5,480
19.	APPLIANCES								
19.1	Freestanding range, 760 mm (30") high, four surface elements, oven auto timer.	24	No.	20.00	480	550.00	13,200	570.00	13,680
19.2	Refrigerator, frost free .42 m3 (15 cu. ft.) capacity.	24	No.	20.00	480	650.00	15,600	670.00	16,080
19.3	Coin operated dryer.	2	No.	20.00	40	660.00	1,320	680.00	1,360
19.4	Coin operated washer.	2	No.	20.00	40	900.00	1,800	920.00	1,840
19.5	Range hood	24	No.	20.00	480	75.00	1,800	95.00	2,280
TOTAL - APPLIANCES		18.98	/m2 GFA		1,520		33,720		35,240

24 UNIT WALK-UP APARTMENT

EDMONTON

CONSTRUCTION COST ESTIMATE

GROSS FLOOR AREA : 1857 m2

Item	Description	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
20.	SITE OVERHEAD								
20.1	Mobilization	24	apt.	0.00	0	0.00	0	0.00	0
20.2	Supervision	24	apt.	1,000.00	24,000	0.00	0	1,000.00	24,000
20.3	Survey	24	apt.	62.50	1,500	0.00	0	62.50	1,500
20.4	Site Office	24	apt.	0.00	0	62.50	1,500	62.50	1,500
20.5	Rentals	24	apt.	0.00	0	125.00	3,000	125.00	3,000
20.6	Small Tools	24	apt.	0.00	0	62.50	1,500	62.50	1,500
20.7	Security	24	apt.	0.00	0	0.00	0	0.00	0
20.8	Hoarding	24	apt.	0.00	0	41.67	1,000	41.67	1,000
20.9	Garbage Removal	24	apt.	0.00	0	83.33	2,000	83.33	2,000
20.10	Cleaning	24	apt.	416.67	10,000	0.00	0	416.67	10,000
TOTAL - SITE OVERHEAD		23.96	/m2 GFA		35,500		9,000		44,500

1991 ALBERTA HOUSE COST COMPARISON STUDY

NOVEMBER 1991

24 UNIT WALK-UP APARTMENT

EDMONTON

CONSTRUCTION COST ESTIMATE

GROSS FLOOR AREA : 1857 m2

Item	Description	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
21.	GENERAL CONTRACTOR'S OVERHEAD & PROFIT								
21.1	Permits	24	apt.	0.00	0	187.50	4,500	187.50	4,500
21.2	Bonding & Insurance	24	apt.	0.00	0	208.33	5,000	208.33	5,000
21.3	Office Overhead	24	apt.	291.67	7,000	166.67	4,000	458.34	11,000
21.4	Profit	24	apt.	641.67	15,400	275.00	6,600	916.67	22,000
TOTAL - GENERAL CONTRACTOR'S OVERHEAD & PROFIT		22.89	/m2 GFA		22,400		20,100		42,500
SUBTOTAL - EDMONTON					\$277,572		\$454,979		\$732,551
GOODS & SERVICES TAX					\$19,430		\$31,849		51,279
TOTAL - EDMONTON		422.09	/m2 GFA		\$297,002		\$486,828		\$783,830

APPENDIX

REDUCED DRAWINGS – 24 UNIT WALK-UP APARTMENT

1. 900 x 2100 x 45mm GALVANIZED DOOR C/W DOOR CLOSER, PUSH AND PULL LOCK, LOCK AND THRESHOLD (NOTE FROM INSIDE SHOULDN'T USE KEY TO OPEN)
 2. 900 x 2100 x 45mm LABELLED (20 MIN) x SOLID CORE WOOD DOOR C/W DOOR CLOSER FRAME TO HAVE 20 MIN. LABEL OR BE MIN. 35 MIN. TRICK.
 3. 860 x 2080 x 45mm SOLID CORE
 4. 760 x 2080 x 35mm HOLLOW CORE.
 5. 700 x 2100 x 35mm HOLLOW CORE
 6. 900 x 2100 x 45mm LABELLED (1 HOUR) METAL DOOR C/W FIRE-RATED PRESSED STEEL FRAME, CLOSER AND LOCK.
 6. 8 DOOR AND SILEN 900 x 2100 x 45mm LABELLED (20 MIN) x SOLID CORE WOOD DOOR C/W CLOSER IN PRESSED STEEL FRAME.
 7. 860 x 2080 x 45mm SOLID CORE FRAME AND OPENING AREA TO BE IN CONFORMANCE TO SUBSECTION 4.10.4.5.11 OF THE ALBERTA BUILDING CODE.

NOTE ALL EXIT DOORS OPENABLE FROM THE INSIDE W
THE USE OF KEYS.

SELF CLOSING DEVICES SHALL BE PROVIDED ON
DOORS LOCATED IN THE 3/4 HOUR AND 1 HOUR
FIRE SEPARATIONS.

EXTERIOR STUD WALL 1/2" SR x Brown STRAPPING, TO
FOUNDATION WALL SIDING ON SUBST. BUILT-UPS.
PAPER. SR x 14 Gauge STUDS @ 48" O.C. . PS 1/2"
MINERAL WOOL INSULATION. VAPOR BARRIER.
12 Gauge GYPSUM BOARD

EXTERIOR STUD WALL 1 HOUR FIRE RESISTANCE
RATING. 2" X 8" X 80mm STRAPPING TO FOUNDATION WALL. NON COMBUSTIBLE SIDING OR STUD BUILDING PAPER. 3/8" X 1400mm SIDING @ 400mm O.C. 3 1/2" MINERAL WOOL INSULATION WITH DENSITY OF 120kg/m³. VAPOR BARRIER. 15mm 1995 X GYPSUM BOARD.

EXTERIOR STUD WALL SIDING, CP STUCCO, BUILDING
PAPER, 3/8 x 8/32mm STUDS & Gypsum Lf, PSI 2-1
MINERAL WOOL INSULATION, VAPOR BARRIER,
1/2" Gypsum BOARD

EXT. EXTERIOR STUD WALL 1 HOUR FIRE RESISTANCE
RATING, MIN. COMBUSTIBLE SIDING OR STUCCO,
BUILDING PAPER, 3/8" x 9mm STUDS & 400mm D
RSI 2 1 MINERAL WOOL INSULATION WITH DENS
OF 1242/m³, VAPOR BARRIER, 25 mm X 111 x
GYPSUM BOARD

INTERIOR WALL (1/2" HOUR FIRE SEPARATION)
2 RINGS OF SR x 8" RINGS STUDS, EACH SET 400mm O.C.
STAGGERED ON COMMON SR x 140mm WALL, MINERAL
FIBRE WITH A MASS OF AT LEAST 1.2 x 1.2m² ON EACH
SIDE, 12 mm GYPSUM BOARD, BRUSH SIDES

INTERIOR WALL 12' High GYPSUM BOARD BOTH SIDES
OF 3" x 14" STUDS

INTERIOR WALL (1/2 HOUR FIRE RESISTANCE RATING) 38 x 89mm STUDS @ 400mm O.C. (BASEMENT) - 38 x 140mm STUDS AND 12.7mm TYPE X GYPSUM BOARD. BOTH SIDES.

INTERIOR WALL (1 HOUR FIRE SEPARATION) 2 ROWS OF 38 x 89mm STUDS, EACH SET AGAINST O.C. STAGGERED ON COMMON 38 x 140mm PLATE, MINERAL FIBRE ON EACH SIDE, 15.9mm TYN X GYPSUM BOARD, BOTH SIDES.

 INTERIOR WALL (1 HOUR FIRE SEPARATION)
58 x 24mm STUDS @ 400mm O.C. AND 25mm
FIRE x CEMENT BOARD BOTH SIDES

INTERIOR WALL 3R & 8TH STOPS AT 4TH FLOOR
ON 4TH AND 12TH FLOOR CYCLING BOARD BOTH SIDES

== 11 == DRUG REAM

1

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DOUBLE STUDS UNDER ALL ROOFING, PORCHES
AND ALL OPENINGS.
- UNLESS 2" OR LESS THICK INSULATED ROOFING, ROOF
ING ABOVE ALL OPENINGS.
ROOFING CAN BE EITHER 10/12, 12/12 OR 12/16
INCH ROOFING, MINIMUM THICKNESS.

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SHAFT ENCLOSURE 5/8 FIRE RESISTANCE RATING AND
 STEEL OR 45 15 Gage TYPE X GYPSUM BOARD 5/8" x
 5/8" THICK GALVANIZED STEEL 1 SHEET AT BOTTOM
 AND 1 TRUSS TOP AND BOTTOM. RESISTANT FRUSTRUM
 CHANNELS 2' 6" HIGH (1) 1" MINIMUM INSULATION W
 DENSITY OF 12 kg/m³ 19mm GYPSUM FIRE BOARD.



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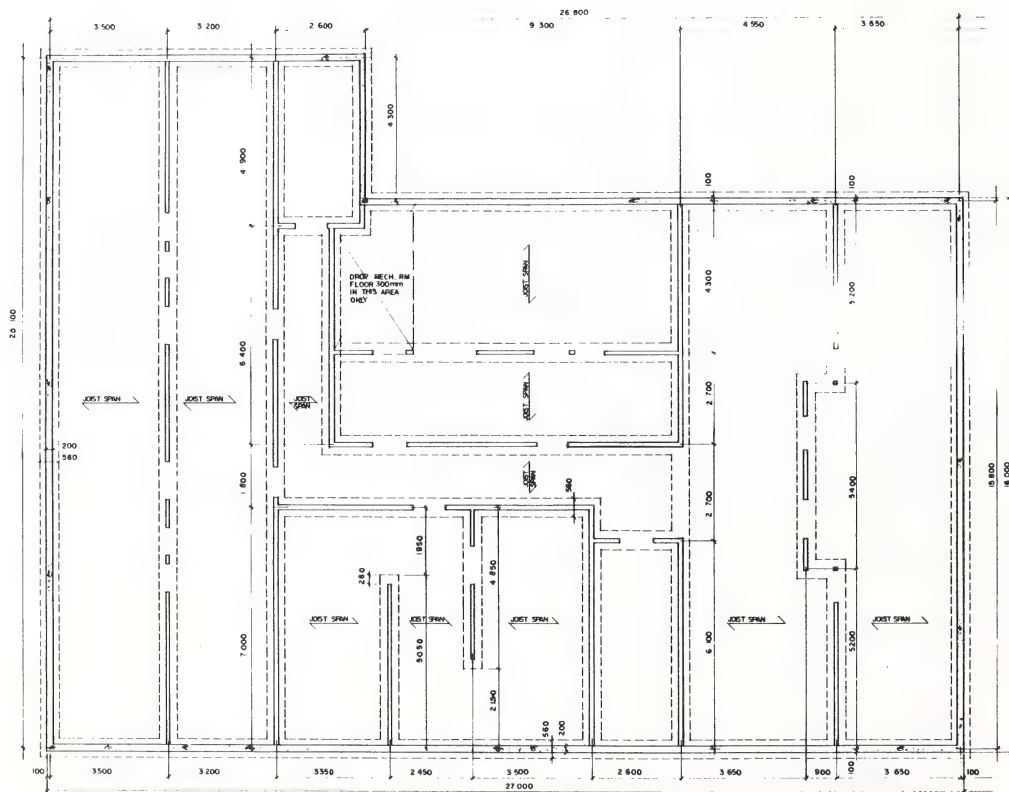
NOTE
SEE BASEMENT FLOOR PLAN
FOR TYPICAL DOOR & BI-FOLD
DOOR TYPES, SIZES & LOCATIONS

ALBERTA HOUSE COST COMPARISON STUDY

MAIN FLOOR PLAN

SCALE 1:50



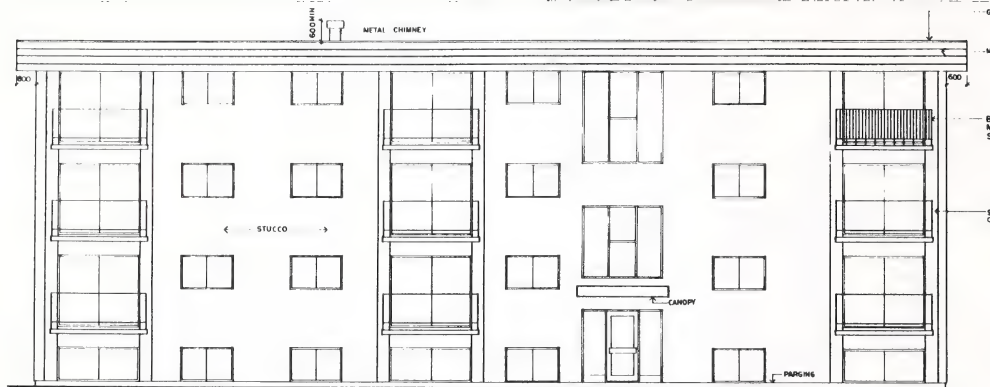


ALBERTA HOUSE COST COMPARISON STUDY

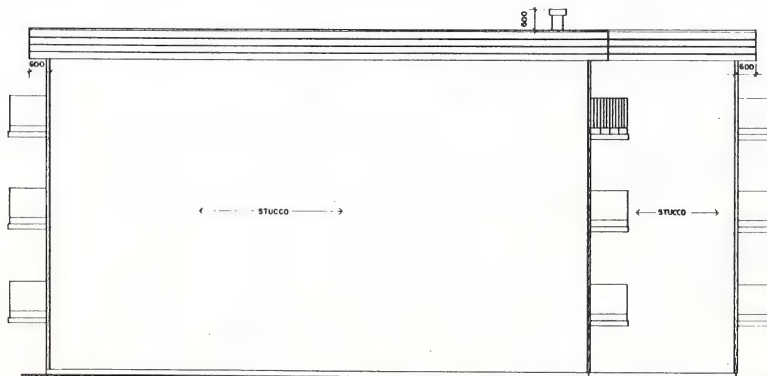
FOUNDATION PLAN

SCALE 1" = 50'





FRONT ELEVATION



RIGHT ELEVATION

ALBERTA HOUSE COST COMPARISON STUDY

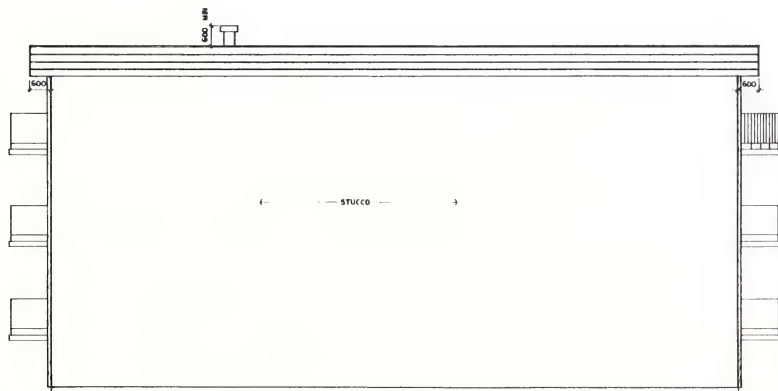
ELEVATIONS

SCALE 1" = 50'





REAR ELEVATION



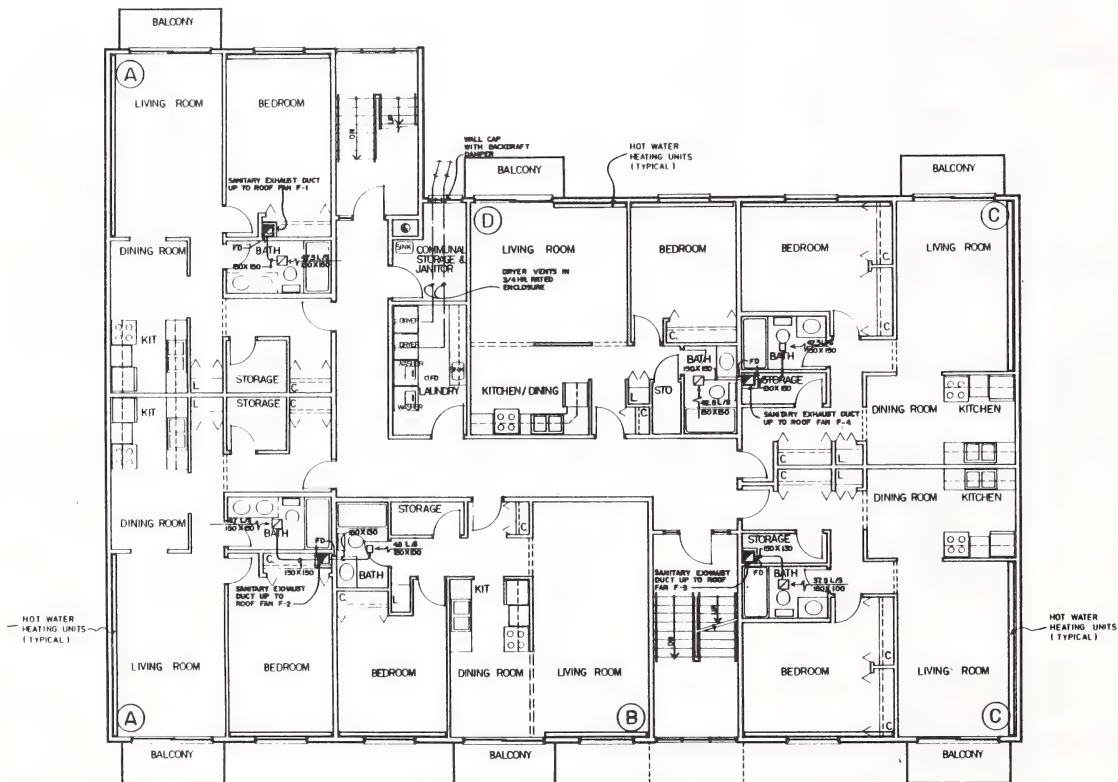
LEFT ELEVATION

DRAWING SHOWN DESIGNED AND SERVED BY A
PROFESSIONAL ENGINEER OR ARCHITECT REGISTERED
IN THE PROVINCE OF ALBERTA

ALBERTA HOUSE COST COMPARISON STUDY
ELEVATIONS

SCALE 1:50

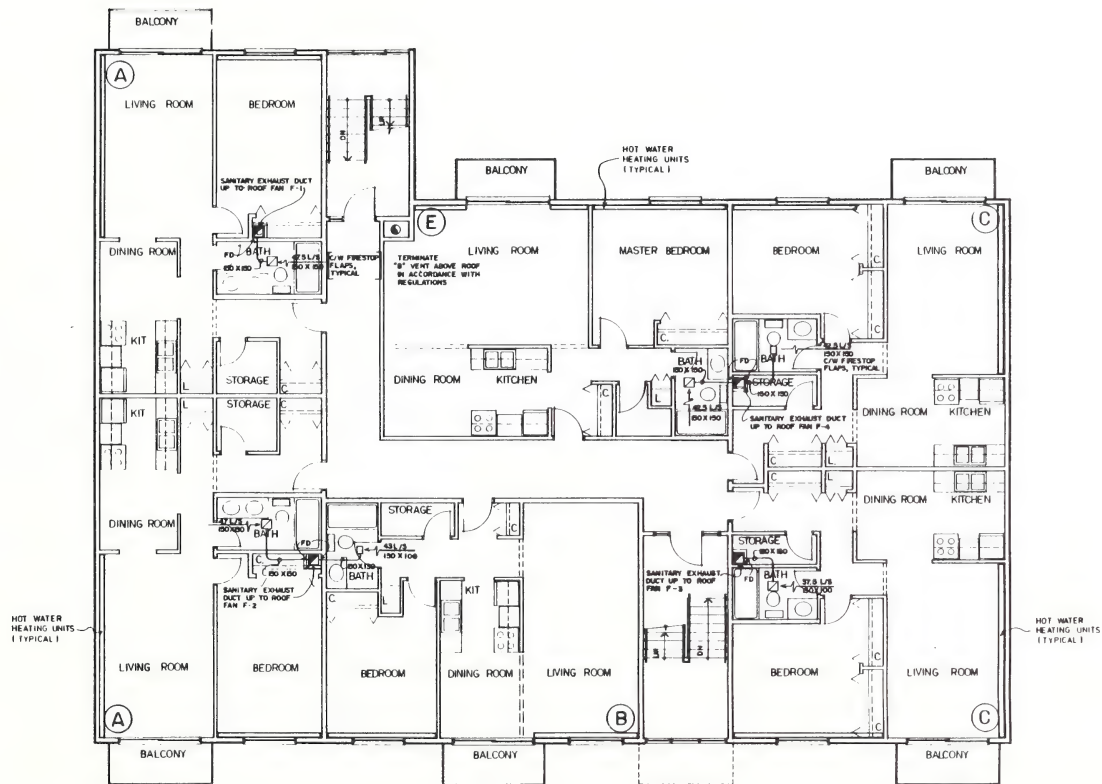




ALBERTA HOUSE COST COMPARISON STUDY

MAIN FLOOR PLAN
MECHANICAL LAYOUT
SCALE 1" = 30'

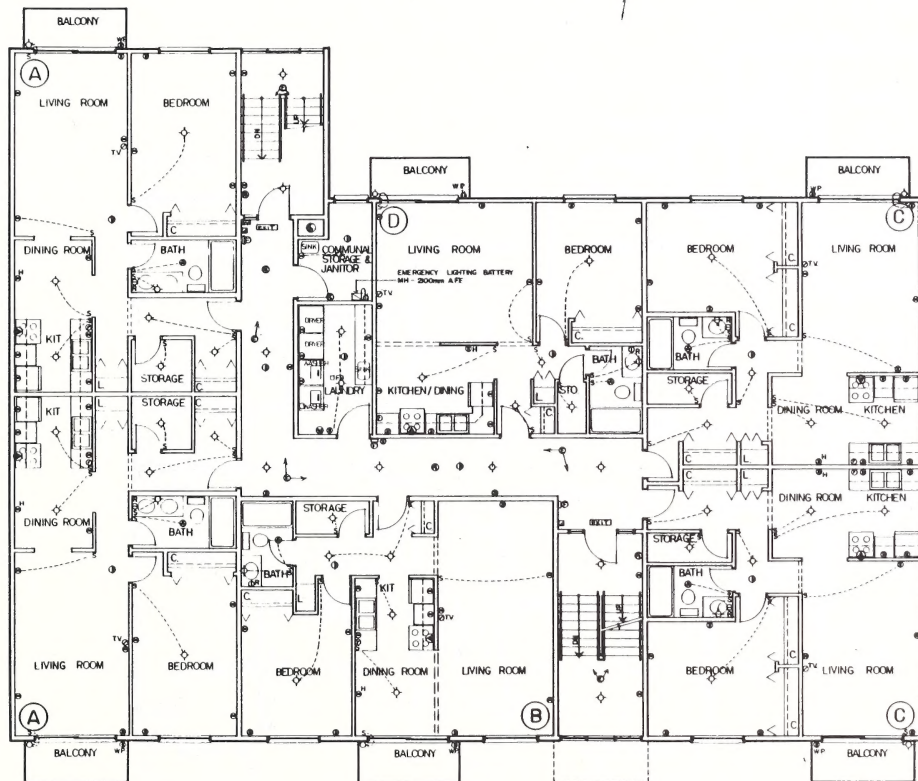




ALBERTA HOUSE COST COMPARISON STUDY

2ND & 3RD FLOOR PLAN
MECHANICAL LAYOUT
SCALE 1" = 30'

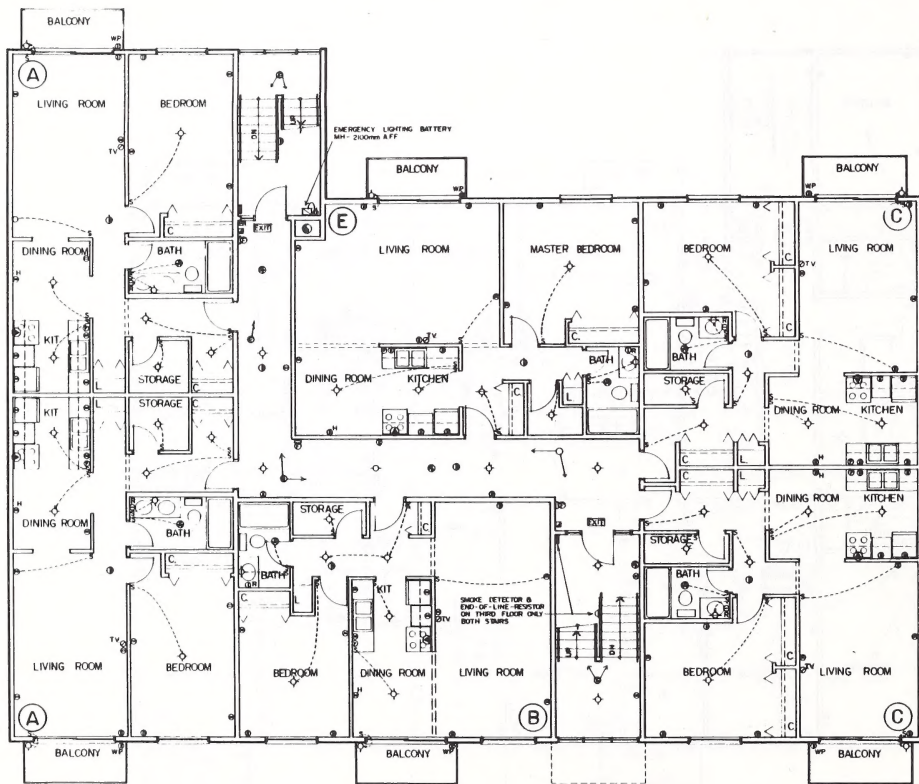




ALBERTA HOUSE COST COMPARISON STUDY

MAIN FLOOR PLAN
 ELECTRICAL LAYOUT
 SCALE 1" = 5'-0"





ALBERTA HOUSE COST COMPARISON STUDY

2ND & 3RD FLOOR PLAN
ELECTRICAL LAYOUT
SCALE 1" = 3'



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